Presentation to the State Information Technology Advisory Committee (SITAC)

Wednesday, June 4, 2008

Dakota Carrier Network Building, Bismarck

Welcome

Lisa Feldner, CIO
Information Technology Department

Legislative Council Project Variance Report

Jim Smith, NDLC Director and Project Sponsor

Jim Gienger, Project Manager

Project Background

- *2001-2003:* NDLC began using XML-based products from Arbortext in the rewrite of the Administrative Code system.
- *2004:* NDLC conducted an analysis of the remaining legislative applications. The recommendation was to seek a vendor to replace all systems with commercial-off-the-shelf components over the next four years.
- *2005:* NDLC requested funding for the project. No new funds were approved. However, the Legislative Assembly approved:
  - Establishment of an executive steering group
  - Authorization to develop a Project Plan (required approval by the Legislative Management Committee)
  - Authorization to select a vendor, through the RFP process, to perform analysis and design work.

Project Background (cont)

- *2005:* The executive steering group for the project was created (6 Legislators, 3 from ITD, 4 from NDLC, and a Project Manager).
- *2005:* Business Case, Project Charter, Project Plan were created and approved.
- *2005:* RFP was released and PTC, parent company of Arbortext, was selected in November.
- *January 2006 – September 2006:* PTC executed Phase 1 (Analysis, Design, Proof-of-Concept, Budget) within budget but over on schedule. Only high-level analysis and design were done.
- *October 2006 – May 2007:* PTC executed the initial stage (Catalyst Initiative) of Phase 2 (Implementation) under budget and on schedule. Legislative Assembly approved funding for implementation of the solution.
- *June 2006:* PTC began implementation.
- *Implementation Budget:* $3,910,827
- *Implementation Timeline:* July 2006 – November 2008

Planned Implementation Timeline

- 46 Deliverables/Milestones defined
- 19 were to be delivered in 2007
- 11 were to be delivered in 1Q2008
- Project completion in November 2008
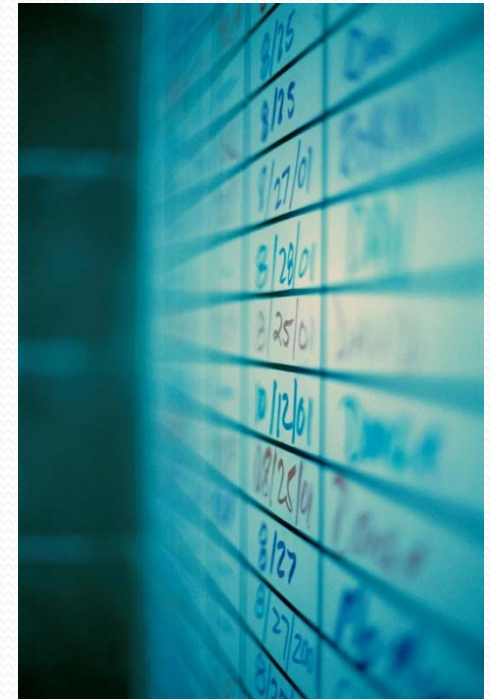
Actual Implementation Timeline

- 46 Deliverables/Milestones defined
- 16 were delivered in 2007
- 0 were delivered in 1Q2008
- Project completion in November 2008
- Schedule variance in excess of 20%
- Why???

Main Issues Affecting Schedule

- Project Plan
  - Beginning in December 2007, as more detailed analysis and design work was being completed, PTC realized the dates associated with the defined milestones (46 of them) did not support the work that needed to be done.
  - PTC "bundled" the milestones into Application Bundles (15 of them).

Main Issues Affecting Schedule

- Foundation Building
  - Data Migration effort took longer than expected.
  - Creating stylesheets (how data output is formatted) was more difficult than expected.
  - Integration of software components proved more difficult than planned.

Main Issues Affecting Schedule

- Resources
  - NDLC resources inexperienced with new technologies.
  - PTC resources changing, resulting in knowledge lost.
  - Insufficient number of PTC resources resulting in too much work for too few resources.

Decisions Affecting Schedule

- Project Plan
  - In February 2008, PTC understood the work within the Application Bundles needed to be re-planned.
  - In March, PTC completed the re-planning effort and defined a new project timeline. The first 3 bundles are scheduled for May delivery.
- Foundation Building
  - PTC dedicated a resource to Data Migration and will deliver in May.
  - PTC added a resource for creating stylesheets and effort is back on schedule.
  - PTC began utilizing their development lab in Uniontown, PA to develop, test, and assure quality prior to delivery to North Dakota. PTC also dedicated resources to the integration effort. This remains an issue.
- Resources
  - NDLC resources continue to gain experience as they test delivered functionality.
  - PTC resources have remained stable for the last 3 months.
  - PTC has added additional resources (26 team members currently).

Project Notes

- *Schedule:* Continues to be an issue. 2 of the 3 Application Bundles scheduled for delivery in May were delivered (AB1 and AB3). The 3rd bundle (AB2) will be delivered in June. Although the individual components have been built, the integration of those pieces is proving to be a bigger challenge than expected. November 2008 project end date has not changed.

- *Budget:* 36% of the budget has been paid.

- *Scope:* 73% of the work has been completed.

- *Users:* Happy with functionality delivered and quality of product.

Large IT Project Ranking Process

Jeff Swank

Enterprise Architecture and Planning
Program Manager

Large Project Ranking Process

- Overview
  - All projects over $250,000 regardless of funding source
  - Agencies will enter their project data into BARS and complete a project ranking worksheet
    - The BARS entry and ranking worksheet must be completed by July 15
  - SITAC members will receive
    - The BARS project report for each project
    - Summary of ranking worksheets
    - Graph of projects by benefit score, risk score and costs

Large Project Ranking Process

- Overview (continued)
  - SITAC will meet complete the ranking process
    - Week of August 25
    - Length of meeting will depend on the number of projects
    - Agencies will make a brief presentation and respond to questions
      - Two minutes to present
      - Three minutes to respond to questions
    - SITAC members will confirm final rankings
    - Results will be communicated to OMB and published in the State IT Plan

Large Project Ranking Process

- Ranking worksheet
  - Benefits
    - Return on Investment
    - Customer Service
    - Internal Efficiencies
    - Mandate
    - Operational Necessity
    - Enterprise
  - Score / Confidence Measure

Large Project Ranking Process

- Ranking worksheet
  - Financial Consideration
    - Funding source(s)
  - Risks
    - Project Management
    - Technology
    - Project Complexity
    - Parameters and Constraints

Large Project Ranking Process
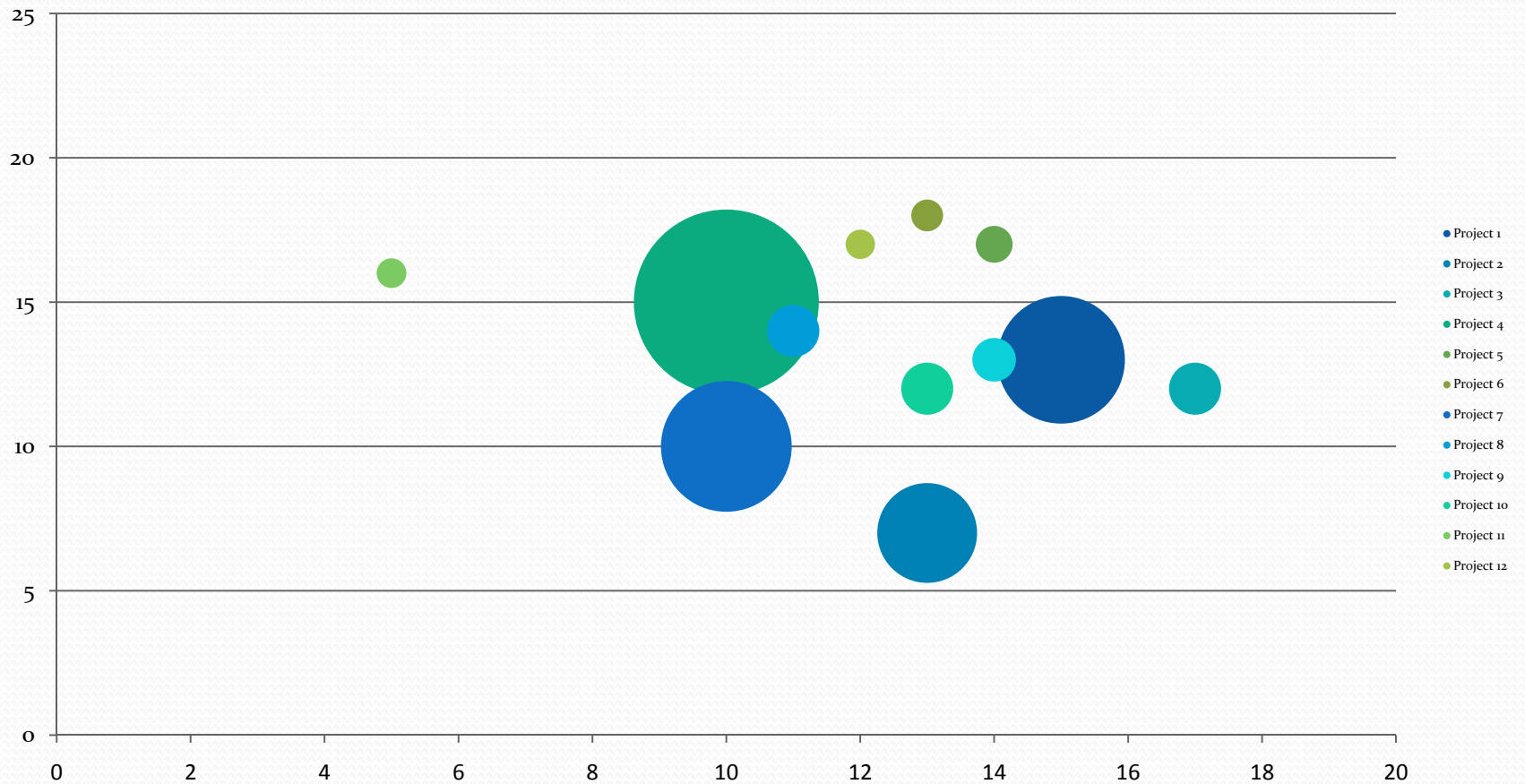
Progress on IT Security Study Recommendations

Dan Sipes, Director

Administrative Services Division

Overview

➢ State Auditor's Office conducts a SAS70 Audit of ITD each biennium.

➢ September 2007 ManTech performed the Security Assessment portion of the Audit
  - External Assessment
  - Internal Assessment
  - Application Assessment – PeopleSoft Financial
  - Penetration Test

External Assessment

➢ Recommendation – Review Content on Publicly Accessible Servers
- We do this on a regular basis and are comfortable with the information that is currently published.

➢ Recommendation – Filter Inbound Access to All State Systems
- Mostly a K-12 and Higher Ed issue.
- ITD only allows external access to servers where there is a business need.
- ITD only opens necessary ports and services on ITD maintained servers.

➢ Recommendation – Ensure Segregation Between Education and State Networks
- ITD has separated access between the Higher Education, K-12 and State Networks.
- Additionally the network is separated into quadrants which allows ITD to better respond to attacks on any of the three network rings.

External Assessment

➢ Recommendation – General Vulnerability Findings
- Numbers in initial report contained many false positives
- Vulnerabilities were classified as High, Medium or Low Risk
- All systems with vulnerabilities have been assigned
- Contacts were made with Higher Ed, K-12 and PSD for their systems
- 81% have been resolved
- ITD uses the same tools as ManTech to scan ITD maintained servers each month to identify and resolve new security risks

Internal Assessment

➢ Recommendation – Segment Public Facing Servers from Internal Network
- To the extent possible ITD architects our servers and network with this principle in mind.
- ITD does maintain multiple DMZ's for selected servers.
- Additionally ITD is exploring a redesign of the data center and related network architecture to give us more flexibility in achieving this security goal while still meeting agency business needs.

➢ Recommendation – Internal Segregation of Critical Servers and Development Systems
- ITD maintains current patch levels and security configurations on all servers in the data center including test and development servers.
- ITD is considering the merits of this recommendation as part of the data center redesign project.

Internal Assessment

➤ Recommendation – Include Applications in Formal Patch Management Program
  - To the extent possible ITD applies current patches for operating systems and application software on a regular basis.
  - ITD's monthly server scan assists in identifying high risk security vulnerabilities if patches are not applied.

➤ Recommendation – Implement Outbound Access Control
  - Generally speaking ITD does not intend to implement this recommendation beyond the passive monitoring already in place.
  - ITD does restrict certain outbound traffic in response to identified security risks.

Internal Assessment

- ➢ Recommendation – Require use of Encrypted Protocols for Remote Management
  - • ITD already uses encrypted protocols for remote management for most systems.
  - • ITD is evaluating solutions for the remaining systems that will address this recommendation without causing significant business impact to users.

- ➢ Recommendation – General Vulnerability Findings
  - • Numbers in initial report contained many false positives
  - • Vulnerabilities were classified as High, Medium or Low Risk
  - • All systems with vulnerabilities have been assigned
  - • 81% have been resolved
  - • ITD uses the same tools as ManTech to scan ITD maintained servers each month to identify and resolve new security risks

Application Assessment

➢ Two major recommendations

- Current Patch Levels – this recommendation has been addressed

- Simultaneous Logins are allowed – this recommendation is a low risk recommendation. ConnectND team is still evaluating the security risk versus the loss of business functionality.

Penetration Testing

➢ Direct Penetration Testing
- Nine systems identified as potential targets – one was successfully compromised. This system was not maintained by ITD.
- The compromised system was patched.

➢ Social Engineering Attempts
- Used social engineering to attempt to compromise user passwords and systems and to test the State's Incident Response procedures.
- The key control to mitigate this threat is user awareness.
- ITD and the State Auditor's Office coordinated an IT Coordinator Security Briefings to raise awareness levels.
- ITD provides on-line Security Awareness training on our web site
- ITD is planning to promote Security Awareness in conjunction with the annual National Cyber Security Awareness Month in October of each year.

New Guidelines for Reporting IT Project Budgets

Mark Molesworth

Enterprise Project Manager

Total Cost of Project Budgeting

Total Cost of Project Budgeting

	Appropriated	Reallocated	Total
Project Costs			
Hardware			$ -
Software/Licenses			$ -
Consulting			$ -
Training			$ -
Project Management			$ -
Staff			$ -
Travel			$ -
Miscellaneous			$ -
i.e. Rental Space			$ -
Risk Contingency			$ -
Management Reserve			$ -
Sub-Total	**$ -**	**$ -**	**$ -**
Non-Project Costs (Operations)			
Maintenance Fees			$ -
Software/Licenses			
Hosting Fees			$ -
Staff			$ -
Sub-Total	**$ -**	**$ -**	**$ -**
Total	**$ -**	**$ -**	**$ -**
Bars Request	**$ -**		
Total Cost of Project	**$ -**		
2YR Cost of Ownership	**$ -**		

Total Cost of Project Budgeting

	Appropriated	Reallocated	Total
Project Costs			
Hardware	$ 150,000.00		$ 150,000.00
Software/Licenses	$ 250,000.00		$ 250,000.00
Consulting	$ 100,000.00		$ 100,000.00
Training	$ 25,000.00		$ 25,000.00
Project Management		$ 25,000.00	$ 25,000.00
Staff		$ 75,000.00	$ 75,000.00
Travel			$ -
Miscellaneous			$ -
i.e. Rental Space			$ -
Risk Contingency	$ 60,000.00		$ 60,000.00
Management Reserve	$ 60,000.00		$ 60,000.00
Sub-Total	**$ 645,000.00**	**$ 100,000.00**	**$ 745,000.00**
Non-Project Costs (Operations)			
Maintenance Fees	$ 10,000.00		$ 10,000.00
Software/Licenses			
Hosting Fees		$ 10,000.00	$ 10,000.00
Staff		$ 30,000.00	$ 30,000.00
Sub-Total	**$ 10,000.00**	**$ 40,000.00**	**$ 50,000.00**
Total	**$ 655,000.00**	**$ 140,000.00**	**$ 795,000.00**
Bars Request	**$ 655,000.00**		
Total Cost of Project	**$ 745,000.00**		
2YR Cost of Ownership	**$ 795,000.00**		

Total Cost of Project Budgeting

Figure 1

Figure 2

2009-11 IT Plan Goals

Jeff Swank

Enterprise Architecture and Planning

Program Manager

2009-11 IT Plan Goals

- Improve the delivery of government services by expanding the use of online and automated systems
  - To improve the usability of the state portal and agency web sites
  - To continue to incorporate e-government services into agency standard business process
  - To use technology to improve the efficiency of state government

2009-11 IT Plan Goals

- Meet changing business needs by providing dependable robust systems
  - To plan and manage system replacement projects to ensure system viability
  - To incorporate disaster recovery and business continuity assessment and mitigation processes as standard practices
  - To perform required updates to accommodate changing business needs and legislative mandates

2009-11 IT Plan Goals

- Allow informed decision making by securely collecting and disseminating information
  - To establish and expand architectures for sharing of data across organization boundaries
  - To build staff competencies and deploy business intelligence tools to provide timely access to accurate information
  - To identity, plan and implement measures necessary to ensure privacy, confidentiality and security of information and other assets

2009-11 IT Plan Goals

- Maximize the value of technology by collaborating to provide shared solutions
  - To manage network services to state government, education and political subdivision to ensure availability at a reasonable cost
  - To identify opportunities and implement shared solutions to reduce the total cost of ownership for state agencies and political subdivisions
  - To leverage the state's investments in enterprise-wide software and infrastructure by upgrading to new functionally and expanding its usage

Desktop Video Demonstration

Lisa Feldner, CIO

Information Technology Department

Wrap-Up